

Schedule PHY 272 Fall 2008 (November 13, 2008)

| Date | To read | Topic | HW |
|----------------|----------------|--|-----------|
| Week 1 | | The Electric Field (charges) | |
| 2-Sep | | Introduction to Fields | |
| 4-Sep | 21.1-2 | Electric Charge | |
| 5-Sep | 21.3 | Coulomb's Law | |
| Week 2 | | The Electric Field | |
| 9-Sep | 21.4-5 | Electric Field | |
| 11-Sep | 21 6-7 | Motion of Charges | |
| 12-Sep | | | HW 1 |
| Week 3 | | Continuos Charge Distribution | |
| 16-Sep | 22 1-3 | Gauss's Law | |
| 18-Sep | 22 4-5 | Charge and Field at Conductor Surfaces | |
| 19-Sep | 22 6 | Gauss from Coulomb | HW 2 |
| Week 4 | | Electric Potential | |
| 23-Sep | 23 1-2 | Potential Difference | |
| 25-Sep | | <i>synthesis/review</i> | |
| 26-Sep | | First Exam (Ch. 21 and 22) | HW 3 |
| Week 5 | | Electric Potential | |
| 30-Sep | 23 3 | Electric field from the Potential | |
| 2-Oct | 23 4 | V for continuous charge distribution | |
| 3-Oct | 23 5 | Equipotentials | HW 4 |
| Week 6 | | Electrostatic Energy | |
| 7-Oct | 24 1-3 | Potential energy and Capacitance | |
| 9-Oct | 24 4 | Circuits | |
| 10-Oct | 24 5-6 | Dielectrics | HW 5 |
| Week 7 | | Electric Currents | |
| 14-Oct | 25 1-2 | Currents and Ohm's Law | |
| 16-Oct | 25 3-5 | Circuits | |
| 17-Oct | 25 6 | RC circuits | HW 6 |
| Week 8 | | Magnetic Field | |
| 21-Oct | 26 1 | Magnetic Force | |
| 23-Oct | 26 2 | Charge in a magnetic field | |
| 24-Oct | 26 3 | Torques on Currents loops | HW 7 |
| Week 9 | | Magnetic Field | |
| 28-Oct | 27 1-2,4 | Biot Savart law, Ampere's Law | |
| 30-Oct | | <i>synthesis/review</i> | |
| 31-Oct | | Second Exam (Ch. 23, to 26) | HW 8 |
| Week 11 | | Magnetic Induction | |
| 4-Nov | 28 1-2 | Magnetic Flux and Faraday Law | |
| 6-Nov | 28 3-4 | Lenz Law, Motional EMF | |
| 7-Nov | 28 6 | Inductance | HW 9 |
| Week 12 | | Circuits | |

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| 11-Nov | 29 1-3 | AC Circuits | |
| 13-Nov | 28 8, 29 5 | LR, LC with generators | |
| 14-Nov | 29 6 | Resonance RLC | HW 10 |
| Week 13 | | Maxwell's Equations | |
| 18-Nov | 31 7-8 | Polarization, Reflection, and Refraction | |
| 20-Nov | 32 1-2 | Mirrors and lenses | |
| 21-Nov | | <i>review</i> | HW 11 |
| Week 14 | | Electromagnetic Waves | |
| 25-Nov | | Third Exam (Ch. 27to 29) | |
| 27-Nov | | Thanksgiving | |
| 28-Nov | | Thanksgiving | |
| Week 15 | | Optics | |
| 2-Dec | 30-1-2 | Displacement current and Maxwell's equations | |
| 4-Dec | 30 3-4 | Electromagnetic Radiation | |
| 5-Dec | 32 4 | Optical Instruments | HW 12 |
| Week 16 | | Interference and Diffraction | |
| 9-Dec | 33 1-3 | Coherence and Interference (double slit) | |
| 11-Dec | 33 4 | Diffraction of a single slit | |
| 12-Dec | 33 6 | Fraunhofer and Fresnel Diffraction | HW 13 |
| Week 17 | | FINAL EXAM, Friday, Dec 19 1:30pm-3:30pm | |